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(71)Applicant : MATSUSHITA ELECTRIC IND CO LTD  
DAIMLER BENZ INTER SERVICE TELEMATIC  
NIPPON KK

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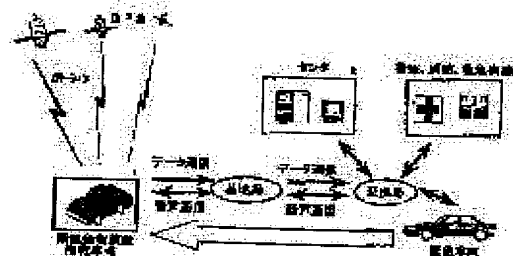
(72)Inventor : YOSHIDA AOSHI  
NEGISHI TATSUYUKI  
MATSUMOTO KENJI  
IWAMATSU HIROSHI  
ONUKE MASAHIRO  
KOUJITANI MASAKATSU

(54) **MEMBERSHIP MANAGING METHOD AND INFORMATION COLLECTION AND PRESENTATION SYSTEM**

(57)Abstract:

**PROBLEM TO BE SOLVED:** To manage membership information and to provide members with various kinds of information by using a radio channel in a system to provide service via a vehicle device and the radio channel.

**SOLUTION:** A center 2 to provide the service like emergency assistance, etc., to the vehicle 1 of a member via a vehicle device and radio channel is provided with facilities to collect and manage the membership information by using the radio channel. In addition, facilities to provide the member with various kinds of information by using the radio channel is also provided. The system to collect emergency information and the one to collect maintenance information of the vehicle exist as an information collection system. In addition, a system to provide traffic information and leisure information exist as an information presentation system. In this way, the membership information is managed and road guidance and sightseeing information, etc., are provided by using an emergency information notifying device without using other communication means.



## CLAIMS

## [Claim(s)]

[Claim 1] In a member management method of a vehicles emergency information communication informing system which consists of vehicle devices which detect state of emergency which performs service provisions, such as accident rescue, to a member via a wireless circuit, such as an accident occurrence of a center and vehicles, and notify emergency information communication to said center via a wireless circuit, A member management method managing information about a member by calling said vehicle devices from said center using a wireless circuit, reading membership information memorized by said vehicle devices, and transmitting data of said member management to said vehicle devices from said center.

[Claim 2] Vehicle devices which notify emergency information communication to a center which detects state of emergency, such as an accident occurrence of vehicles, and performs service provisions, such as accident rescue, via a wireless circuit, comprising:

A means to answer a call from said center.

A means to read member management data of memory storage and to transmit to said center.

A means to receive data of member management from said center, and to store in said memory storage.

[Claim 3] An information collection providing system which consists of a center characterized by comprising the following which performs service provisions, such as accident rescue, to a member, and vehicle devices which detect state of emergency, such as an accident occurrence of vehicles, and notify emergency information communication to said center via a wireless circuit.

A means to call said vehicle devices to said center, and to collect various data.

A means to transmit various data to said vehicle devices.

A means to form a means to search and provide a variety of information according to a demand from said vehicle devices, and to answer said vehicle devices at a call from said center.

A means to read state information data of said vehicle devices, and to transmit to said center.

A means to receive a variety of information from said center, and to store in memory storage.

## CLAIMS

## [Claim(s)]

[Claim 1] In a member management method of a vehicles emergency information communication informing system which consists of vehicle devices which detect state of emergency which performs service provisions, such as accident rescue, to a member via a wireless circuit, such as an accident occurrence of a center and vehicles, and notify emergency information communication to said center via a wireless circuit, A member management method managing information about a member by calling said vehicle devices from said center using a wireless circuit, reading membership information memorized by said vehicle devices, and transmitting data of said member management to said vehicle devices from said center.

[Claim 2] Vehicle devices which notify emergency information communication to a center which detects state of emergency, such as an accident occurrence of vehicles, and performs service provisions, such as accident rescue, via a wireless circuit, comprising:

A means to answer a call from said center.

A means to read member management data of memory storage and to transmit to said center.

A means to receive data of member management from said center, and to store in said memory storage.

[Claim 3] An information collection providing system which consists of a center characterized by comprising the following which performs service provisions, such as accident rescue, to a member, and vehicle devices which detect state of emergency, such as an accident occurrence of vehicles, and notify emergency information communication to said center via a wireless circuit.

A means to call said vehicle devices to said center, and to collect various data.

A means to transmit various data to said vehicle devices.

A means to form a means to search and provide a variety of information according to a demand from said vehicle devices, and to answer said vehicle devices at a call from said center.

A means to read state information data of said vehicle devices, and to transmit to said center.

A means to receive a variety of information from said center, and to store in memory storage.

## DETAILED DESCRIPTION

## [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the member management method of managing a member especially using a wireless circuit, about the member management method of a vehicles emergency intelligence informing system.

[0002]

[Description of the Prior Art] A vehicles emergency intelligence informing system is a system which notifies vehicles emergency intelligence to a service center automatically via a wireless circuit from the vehicles emergency information messaging device carried in vehicles at the time of accident occurrences, such as a collision of vehicles. By this system, time until emergency vehicles, such as an ambulance and a police car, arrive to the spot can be shortened, and a wounded person can be rescued and relieved more nearly promptly. Also by state of emergency, such as emergency case generating, by carrying out the depression of the emergency button of a vehicles emergency information messaging device, vehicles emergency intelligence is notified to a center via a wireless circuit, and conversation with the service staff of a center can be held.

[0003] There is usually speech conversation at the time in vehicles emergency intelligence service with the automatic announcement at the time of an accident occurrence, the manual report in an emergency, and the manual report of load side service. At the time of a collision and accident occurrence of vehicles, the automatic announcement at the time of an accident occurrence is automatically notified to a service center, and is notified to an urgent service center further succeeding. It notifies a service center that the manual report in an emergency pushes emergencies, such as emergency case generating, and an emergency dial button, and it is notified to an urgent service center further succeeding. When troubled by failure of a blowout etc., the manual report of load side service will be notified to a load service center, if a load service request button is pushed.

[0004] The conventional vehicles emergency information messaging device notifies the position and vehicle condition of vehicles to a center using a wireless circuit, when state of emergency, such as a collision of vehicles, occurs. Hereafter, the outline of the function of the vehicle control device of the conventional vehicles emergency intelligence system is explained.

(1) Communication function (communication with a service center) : using a portable telephone, if it is an area of a cellular phone which can be talked over the telephone, it can communicate. 9600-bps data communications and a voice call are possible. Data communications and a voice call are switched automatically. It has a single diversity antenna with an automatic switching function.

(2) Position detecting function (detecting position of self-vehicles): GPS performs a detecting position. It has a gyroscope and a position can be recorded also in the tunnel which cannot use GPS. The condition of use of a speed sensor, reverse, or a brake is recorded.

(3) Urgent detection function (urgent detection of self-vehicles) : it has a collision-detection device sensor and a sideslip sensor, and detect what kind of accident occurred.

(4) Vehicles emergency intelligence report function (emergency dial to a service center) : perform the automatic announcement by detection of a collision-detection device sensor and a sideslip sensor. The manual report by the depression of a vehicles emergency intelligence notification button can also be performed.

(5) Load side service function (it is a support call to a service center) : a support request is possible by the manual report by the depression of a load service request button.

(6) A hand set function (voice communication is possible by a hand set), and a handsfree function (it is handsfree and voice communication is possible) : it can talk over the telephone as a usual telephone with a hand set and a cradle, and a handsfree telephone call can be performed by the microphone and an exclusive loudspeaker.

[0005]

[Problem(s) to be Solved by the Invention] In the conventional vehicles emergency information messaging device, it could not use in addition to state of emergency, but procedure of a member's period management or contract modification needed to be performed using means of communication, such as a telephone. In order to give information, including guidance etc., from a center to vehicles, other information machines and equipment for exclusive use had to be installed.

[0006] This invention solves the problem of the above-mentioned conventional vehicles emergency information messaging device, and an object of this invention is to provide vehicles emergency information messaging devices other than an emergency which sometimes usually transmit from a center and receive membership information, and can perform member management and other information services.

[0007]

[Means for Solving the Problem] In order that this invention may solve the above-mentioned technical problem, A member management method of a vehicles emergency information communication informing system which consists of vehicle devices which detect state of emergency which performs service provisions, such as accident rescue, to a member via a wireless circuit, such as an accident occurrence of a center and vehicles, and notify emergency information communication to said center via a wireless circuit, Vehicle devices were called from a center using a wireless circuit, membership information memorized by vehicle devices was read, and it had composition which transmits data of member management to vehicle devices from a center.

[0008] By having constituted in this way, a member's data can be reported to a center also except state of emergency, or guidance information can be sent to vehicles from a center.

[0009]

[Embodiment of the Invention] The invention indicated to claim 1 of this invention, In the member management method of the vehicles emergency information communication informing system which consists of vehicle devices which detect state of emergency which performs service provisions, such as accident rescue, to a member via a wireless circuit, such as an accident occurrence of a center and vehicles, and notify emergency information communication to said center via a wireless circuit, Call said vehicle devices from said center using a wireless circuit, and the membership information memorized by said vehicle devices is read, It is the member management method of managing the information about a member by transmitting the data of said member management to said vehicle devices from said center, and it has the operation of making member management possible, without using other means of communication, such as a telephone.

[0010] In the vehicle devices which notify emergency information communication to the center which the invention indicated to claim 2 of this invention detects state of emergency, such as an accident occurrence of vehicles, and performs service provisions, such as accident rescue, via a wireless circuit, A means to answer the call from said center, and a means to read the member management data of memory storage and to transmit to said center, It is the vehicle devices possessing a means to receive the data of the member management from said center, and to store in said memory storage, and it has the operation of making it possible to send membership information to a center, without using other means of communication, such as a telephone.

[0011] The center where the invention indicated to claim 3 of this invention performs service provisions, such as accident rescue, to a member, In the information collection providing system which consists of vehicle devices which detect state of emergency, such as an accident occurrence of vehicles, and notify emergency information communication to said center via a wireless circuit, A means to call said vehicle devices to said center, and to collect various data, A means to form a means to transmit various data to said vehicle devices, and a means to search and provide a variety of information according to the demand from said vehicle devices, and to answer said vehicle devices at the call from said center, A means to read the state information data of said vehicle devices, and to transmit to said center, It is the information collection providing system which formed a means to have received the variety of information from said center, and to store in memory storage, and has the operation of collecting a member's information using a vehicles emergency information messaging device, or providing a member with information.

[0012] Hereafter, an embodiment of the invention is described in detail, referring to drawing 1.

[0013] (A 1st embodiment) In vehicle devices and the system which performs service provision via a wireless circuit, a 1st embodiment of this invention is the member management method which transmits and receives membership information using a wireless circuit.

[0014] Drawing 1 is a block diagram of the member management system of a 1st embodiment of this invention. In drawing 1, the vehicle-devices loading vehicles 1 are vehicles which can notify accident information etc. to the center 2 in emergencies, such as an accident occurrence, and can demand rescue. The center 2 is an organization which performs service provisions, such as accident rescue, to a member via a wireless circuit.

[0015] The vehicles 1 have always received the electric wave from the satellite of GPS, and grasp the self position. While being used for a navigation system, fixed time maintenance of this position information is carried out as information notified to the center 2 in an emergency. Accident information is notified to the center 2 via a base station and an exchange station in emergencies, such as an accident occurrence, from the vehicles 1, the police, fire fighting, etc. are connected with from the center 2 if needed, and an emergency vehicle hastens to an accident site. This point is the same as that of the conventional emergency reporting system.

[0016] Since a vehicles emergency intelligence informing system provides service when the member who receives service is within the term of validity, it cannot provide service for the member in whom the term of validity went out. In addition to an emergency, the center 2 calls the vehicles 1 and performs period management of vehicle devices. The timer is formed in vehicle devices, and if a term expires, cannot receive service and it is come.

[0017] If expiration approaches, it can also apply for renewal of a contract to a center from the direction of vehicle devices. It tells that expiration is close to center 2 empty-vehicle both devices just before a term

expires. Since center 2 empty-vehicle both devices cannot be called unless it may use vehicles for how many months, a grace period is provided. If renewal of a contract is made, it will enable it to receive service continuously, when it is able to connect with the center 2 for the first time one month after expiration. For example, a contract is not updated if not connectable ten months after expiration. If a contract becomes effective, an ID number is given to center 2 empty-vehicle both devices, within the term of validity, it is attested by the ID number in the center 2, and service can be received.

[0018] While communicating member management, when state of emergency occurs on the vehicles 1, it changes to transmission of emergency information communication preferentially, and member management processing is closed.

[0019] As mentioned above, in vehicle devices and the system which performs service provision via a wireless circuit, since it had composition which holds member management which manages a member using a wireless circuit, member management is possible in a 1st embodiment of this invention, without using other means of communication, such as a telephone.

[0020] (A 2nd embodiment) A 2nd embodiment of this invention, In vehicle devices and the system which performs service provision via a wireless circuit, it is an information collection providing system possessing a means to manage a member using a wireless circuit, a means to collect a member's information using a wireless circuit, and a means to provide a member with information using a wireless circuit.

[0021] The composition of the member management system of a 2nd embodiment of this invention is the same as a 1st embodiment.

[0022] The center 2 calls the vehicles 1 in addition to an emergency, and collects various kinds of information on the vehicles 1. For example, the data of mileage or a various sensor is collected and it uses for the maintenance of the vehicles 1.

[0023] The equipment for an information service and the necessary personnel are prepared for the center 2, and according to a member's demand, traffic information and leisure information can be transmitted and it can use for a drive. Circuit with an another object for urgent is used for the circuit between the center 2 and an exchange station. From the center 2, it connects by other information service organizations and circuits, and may be made to talk with a crew member directly. For example, it may enable it to ask a sightseeing information service organization sightseeing guidance to the destination of a drive.

[0024] While performing information gathering and communication of informational service, when state of emergency occurs on the vehicles 1, it changes to transmission of emergency information communication preferentially, and processing of informational service is closed.

[0025] As mentioned above, in a 2nd embodiment of this invention, since it had vehicle devices and composition which formed a means to provide a member with information at the system which performs service provision via a wireless circuit using a wireless circuit, a member can be provided with various kinds of information using a vehicles emergency information messaging device.

[0026]

[Effect of the Invention] As mentioned above, in this invention, in vehicle devices and the vehicles emergency intelligence informing system which performs service provision via a wireless circuit, since it had composition which manages membership information using a wireless circuit, the effect that member management is possible is acquired, without using other means of communication, such as a telephone.

[0027] Vehicle devices and a means to manage a member using a wireless circuit to the vehicles emergency intelligence informing system which performs service provision via a wireless circuit, Since a means to collect a member's information using a wireless circuit, and a means to provide a member with information using a wireless circuit were formed, the effect that a member's information can be collected using a vehicles emergency information messaging device, or a member can be provided with information is acquired.